REMARKS

Claims 1-21 and 23-31 are pending in the present application and were examined. Claims 1-12, 14, 16, 18, 19, 21 and 23 stand rejected and Claims 13, 15, 17 and 20 are objected to. In response, Claims 1, 6, 11, 14, 15, 21 and 26 are amended, Claims 12, 13, 24, 28 and 31 are cancelled and no claims are added. Applicants respectfully request reconsideration and withdrawal of the rejections of record in view of at least such amendments and the following remarks.

I.   Claims Rejected Under 35 U.S.C. §102(e)

The Examiner has rejected Claims 1-12, 14, 16, 18-19, 21 and 23-31 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent Application No. 2004/0205298 of Schulz ("Schulz"). In response, Applicants amend independent Claims 1, 6, 11, 21 and 26, as follows, to place the pending claims in condition for allowance by incorporating the features of objected to Claims 13 and 15, as well as intervening Claims 12 and 14, respectively.

Regarding Claims 1 and 6, Claims 1 and 6 are amended, as following, to incorporate claim features from objected to Claims 15 and intervening Claim 14:

> tracking memory subsystem requests;
> selecting a time interval;
> summing, for each clock cycle within the selected interval, a number of outstanding memory requests as a request sum;
> dividing the request sum by a number of bus clocks within the selected interval to form an average memory subsystem occupancy level for the interval to track the average memory subsystem occupancy level as a memory subsystem response level according to the memory subsystem requests to detect the memory subsystem response level according to at least one bus transaction directed to a main memory;
> prefetching data according to an adjusted prefetch depth; and
> adjusting the prefetch depth a according to the detected memory subsystem response level. (Emphasis added.)

Applicants respectfully submit that independent Claims 1, 6 and 11, prior to amendment, recite "detecting a memory subsystem response level according to at least one bus transaction request directed to a main memory." Claim 15 depends from intervening

Claim 14 to further define the feature of "detecting a memory subsystem response level according to at least one bus transaction request directed to a main memory," as recited by independent Claim 11.

As indicated by Examiner, Claim 15, in conjunction with intervening Claim 14, includes allowable subject matter. Accordingly, Claims 1 and 6 are amended to supplement the feature of "detecting a memory subsystem response level according to at least one bus transaction directed to a main memory" with the features of dependent Claims 15 and intervening Claim 14 to further expand the "detecting the memory subsystem response level according to at least one bus transaction directed to a main memory" of independent Claims 1 and 6.

As a result, Applicants' amendment of Claims 1 and 6, to incorporate the features of dependent Claims 15 and intervening Claim 14, results in the incorporation of allowable subject matter into Claims 1 and 6. Hence, Applicants respectfully submit that Claims 1 and 6, as amended, are patentable over Schultz, as well as references of record, by including the indicated allowable subject matter of dependent Claim 15 and intervening Claim 14.

Therefore, Claims 1 and 6, as well as dependent Claims 2-5 and 7-10, for at least the reasons provided above, are also patentable over Schultz, as well as references of record and therefore in condition for allowance. Consequently, Applicants respectfully request that the Examiner reconsider and withdraw the §102(e) rejection of Claims 1-10.

Regarding Claim 11, Claim 11 is amended to incorporated the objected to subject matter of dependent Claim 13 and intervening Claim 12. Hence, Applicants respectfully submit that Claim 11, by being amended to include the allowable subject matter of Claim 13 and intervening Claim 12, is now patentable over Schultz, as well we references of record and therefore in condition for allowance.

Therefore, Applicants respectfully request that the Examiner reconsider and withdraw the §102(e) rejection of Claims 11, 16, 18 and 19. In addition, Applicants respectfully request that the Examiner allow rejected Claims 11, 16 and 18, and objected to Claims 14, 15, 17 and 20.

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Regarding Claim 21, Claim 21 is amended to recite the following claims feature which is neither expressly nor inherently disclosed by Schultz:

memory occupancy detection logic to track memory subsystem requests, to select a time interval, to sum for each clock cycle within the selected interval, a number of outstanding memory requests as a request sum and to divide the request sum by a number of bus clocks within the selected interval to form an average memory subsystem occupancy level for the interval; and

prefetch depth logic to track the average memory subsystem occupancy level as a memory subsystem response level according to the memory subsystem requests to detect the memory subsystem response level according to at least one bus transaction directed to a main memory, and to adjust a prefetch depth according to the detected memory subsystem response level. (Emphasis added.)

Applicants respectfully submit that Claim 21 is amended to incorporate the features of objected to Claim 15 and intervening Claim 14 which further define "detecting a memory subsystem response level according to at least one bus transaction request directed to a main memory" as recited by the prefetch depth logic of Claim 21, prior to amendment. Hence, for at least the reason provided above, Applicants respectfully submit that Claim 21, as amended, now includes allowable claim features of Claim 15 and intervening Claim 14.

Therefore, Applicants respectfully submit that Claim 21, as amended, as well as dependent Claims 23 and 25, are patentable over Schultz, as well as references of record and in condition for allowance by including the allowable subject matter of objected to Claims 15 and intervening Claim 14. Therefore, Applicants respectfully request that the Examiner reconsider and withdraw the §102(e) rejection of Claims 21, 23 and 25.

Regarding Claim 26, Claim 26 is amended to recite analogous claim features to amended Claim 21. Therefore, Applicants' argument provided above with regard to the §102(e) rejection of Claim 21 equally apply to the §102(e) rejection of Claim 26.

Consequently, Applicants respectfully submit that Claim 26 by including the allowable subject matter of objected to Claims 14 and 15, as well as dependent Claims 27, 29 and 30, are patentable over Schultz, as well as references of record. Therefore,

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Applicants respectfully request that the Examiner reconsider and withdraw the §102(e) rejection of Claims 26, 27, 29 and 30.

CONCLUSION

In view of the foregoing, it is submitted that Claims 1-21 and 23-31, as amended, patentably define the subject invention over the cited references of record, and are in condition for allowance and such action is earnestly solicited at the earliest possible date. If the Examiner believes a telephone conference would be useful in moving the case forward, he is encouraged to contact the undersigned at (310) 207-3800.
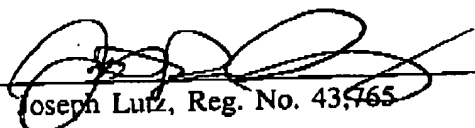
If necessary, the Commissioner is hereby authorized in this, concurrent and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2666 for any additional fees required under 37 C.F.R. §§1.16 or 1.17, particularly, extension of time fees.

Respectfully submitted,

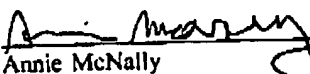BLAKELY, SOKOLOFF, TAYLOR, & ZAFMAN LLP

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I hereby certify that this correspondence is being transmitted via facsimile on the date below, in an envelope addressed to: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

_____   1/5/2007
Annie McNally   Date

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